DOCUMENT RESUME

ED 127 421 CE 007 147

AUTHOR Kuriloff, Arthur H.; Yoder, Dale
TITLE Teamwork in Task Analysis. Training Manual V. Evaluation of the Marine Corps Task Analysis Program. Technical Report No. 9.
INSTITUTION California State Univ. Foundation, Los Angeles.
SPONS AGENCY Office of Naval Research, Arlington, Va. Personnel and Training Research Programs Office.
PUB DATE Nov 75
CONTRACT N00014-74-A-0436-0001
NOTE 48p.; For related documents see CE 007 018, 007 021, 007 017, 007 662, and 006 899; Figure 1 will not reproduce well due to small, broken type

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Conflict Resolution; Force Field Analysis; Management by Objectives; Organizational Change; *Organizational Development; *Task Analysis; *Team Training; *Teamwork
IDENTIFIERS Marine Corps

ABSTRACT

This training manual provides guidelines for effective teamwork and work-team maintenance and development. It was designed for use in the Marine Corps Task Analysis program, in which staff members are organized to form a work-team whose continuing performance as an effective team is crucial for success of the project. Chapter 1, the major portion of the manual, begins with an explanation of the major obstacles to optimal team performance. Methods using the tool of intervention for diagnosing problems in work-teams are described, with an explanation of such specific techniques as goal-setting, action planning, the organization mirror, force analysis, and business games. Chapter 1 also outlines methods and techniques for achieving organizational change and improvement, with special attention to conflict resolution, role reversal, and team development. Chapter 2 explains "management by objectiveness" in teamwork. Chapter 3 discusses how use of the matrix organization may offer advantages as an alternative to the traditional organizational pyramid. Included is a 14-item annotated bibliography of books and other published materials dealing with organization maintenance, development, and teamwork. (Author/WL)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED 137421

TEAMWORK
IN
TASK ANALYSIS

Training Manual V

Arthur H. Kuriloff and Dale Yoder

Technical Report No. 9

EVALUATION OF THE MARINE CORPS
TASK ANALYSIS PROGRAM

A Research Project Supported By

Commandant of the Marine Corps (Code RD)

And Monitored By

Personnel and Training Research Programs
Psychological Sciences Division
Office of Naval Research
Contract No. N00014-74-A-0436-0001
NR 151-370

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Approved for public release; distribution unlimited.
Reproduction in whole or in part is permitted for any
purpose of the United States Government.

California State University, Los Angeles Foundation

November, 1975

CE 007 147

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

ED127421

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Technical Report No. 9	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Teamwork in Task Analysis		5. TYPE OF REPORT & PERIOD COVERED Technical Report and Training Manual 6. PERFORMING ORG. REPORT NUMBER TA Technical Report No. 9 Training Manual V
7. AUTHOR(s) Athur H. Kuriloff and Dale Yoder		8. CONTRACT OR GRANT NUMBER(s) N00014-74-A-0436 0001
9. PERFORMING ORGANIZATION NAME AND ADDRESS California State University, Los Angeles Foundation 5151 State University Drive Los Angeles, Calif. 90032		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS PE 61153N, Proj. RR 042-04 TA RR 042-04-02 NR 151-370
11. CONTROLLING OFFICE NAME AND ADDRESS Personnel and Training Research Programs Office of Naval Research (Code 458) Arlington, Virginia 22217		12. REPORT DATE November, 1975 13. NUMBER OF PAGES 36
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited. Reproduction in whole or in part is permitted for any purpose of the United States Government.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

This research was sponsored jointly by the Commandant of the Marine Corps (Code RD) and the Office of Naval Research.

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Team Development
Organizational Improvement
Organizational Change
Force Analysis
Conflict Resolution
Management by Objectives
Matrix Organization

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Each project in the Marine Corps Task Analysis program is assigned to staff members, organized to form a work-team. Their continuing performance, as an effective team, is crucial for success of the project. This Training Manual provides guidelines for effective teamwork and work-team maintenance and development. Chapter I, the major portion of the Manual, begins with an explanation of the major obstacles to optimal team performance and describes methods using the tool of intervention for diagnosing problems in

CE007147

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102 LF 014 6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

work teams, with explanation of such specific techniques as goal-setting, action-planning, the organization mirror, force analysis, and business games. Chapter I also outlines methods and techniques for achieving organizational change and improvement, with special attention to conflict resolution, role reversal, and team development. Chapter 2 of the Manual explains "management by objectives" as an integrated system for planning and achieving effectiveness in teamwork. Chapter 3 discusses how use of the matrix organization may offer advantages as an alternative to the traditional organizational pyramid. Included is an annotated bibliography of books and other published materials dealing with organization maintenance, development, and teamwork.

SUMMARY

Each project in the Marine Corps Task Analysis program is assigned to staff members, organized to form a work-team. Their continuing performance, as an effective team, is crucial for the success of the project. This Training Manual provides guidelines for effective teamwork and work-team maintenance and development. Chapter 1, the major portion of the Manual, begins with an explanation of the major obstacles to optimal team performance and describes methods using the tool of intervention for diagnosing problems in work teams, with explanation of such specific techniques as goal-setting, action-planning, the organization mirror, force analysis, and business games. Chapter 1 also outlines methods and techniques for achieving organizational change and improvement, with special attention to conflict resolution, role reversal, and team development.

Chapter 2 of the Manual explains "management by objectives" as an integrated system for planning and achieving effectiveness in teamwork. Chapter 3 discusses how use of the matrix organization may offer advantages as an alternative to the traditional organizational pyramid. Included is an annotated bibliography of books and other published materials dealing with organization maintenance, development, and teamwork.

TRAINING MANUAL, V

TABLE OF CONTENTS

SECTION		PAGE
CHAPTER 1	DEVELOPING THE ORGANIZATION	1
	Overcoming Obstacles to Teamwork	1
	Organizational Development - Defined	4
	Problem-Solving in Organizational Development	5
	Interventions for Diagnosis	6
	Manager's Diagnostic Team Meetings	6
	Goal-Setting and Action Planning Meeting	7
	Work Group Diagnostic Meeting	8
	The Organizational Mirror	9
	Force Field Analysis	11
	Interventions for Change	13
	Operating Group Team-Building Meeting	13
	Conflict Resolution--Meetings for Two	15
	Intergroup Team-Building Meeting	18
	Guidelines for Consensus in Group Decision-Making	21
CHAPTER 2	MANAGEMENT BY OBJECTIVES	22
	Characteristics of Plans	23
	Planning Procedure	24

TABLE OF CONTENTS

SECTION		PAGE
CHAPTER 3	MATRIX ORGANIZATION	29
BIBLIOGRAPHIES	FOR CHAPTER 1	33
	FOR CHAPTERS 2 AND 3	34

CHAPTER 1

DEVELOPING THE ORGANIZATION

OVERCOMING OBSTACLES TO TEAMWORK

Organizations sometimes suffer from win-lose power struggles between managers and groups. Symptoms of this organizational disease are seen in infighting for status, authority, control, or recognition by superiors. Managers seeking to win may exhibit ruthless behavior demoralizing to the organization. They ride rough-shod over others in their efforts to win.

When win-lose values permeate the organization, members play it close to the chest. Communication between individuals and groups loses authenticity, and innovative ideas are stillborn. Individual managers devote much of their energy to survival in the hidden warfare of the destructive psychological win-lose game.

Win-lose behavior stems from individual attitudes and management climate. Attitudes may be evidenced by the individual's or the group's behavior. The assumption underlying these attitudes is that the interests of two individuals or groups are mutually exclusive--that the only possible outcome is for one to win and the other to lose. As a result, defense of the ego assumes paramount importance. The individual manager comes to believe that his position, or his group's, is the only one that is right and proper. The accompanying intolerance is aggravated by an increasing suspicion of other managers and their groups.

The win-lose attitude reflects the fear of losing face--defensiveness--as if the individual manager were putting his self on the line. Acting on the basis of this perception, he adopts a counterdefensive posture--protecting himself by showing inappropriate and immoderate aggressiveness towards other managers and groups.

Distorted perceptions are part and parcel of win-lose pathology. Differences between people tend to be exaggerated, agreement minimized. The individual assumes more positive "ownership" of his ideas, blocking and belittling those of his "opponent." A kind of demonology emerges--angels versus devils, good guys versus bad guys. The possibility for cooperative problem-solving vanishes.

The typical result of win-lose pathology is loss of organizational effectiveness. Victory promotes complacency; defeat leads to regrouping of forces and all-out warfare.

To change from a climate of win-lose to one of free and open expression is a challenging but not impossible task. The basic problem is that of changing personal attitudes. People do not "have" attitudes in the same sense that they have automobiles or typewriters. Attitudes may be described as sets of perceptions, or personal ways of viewing and interpreting the environment. They are deeply ingrained by years of conditioning and not easily changed. More often than not, persuasion, logical argument, admonishment, punishment or other frontal attacks on attitudes fail, for we view change-efforts of this kind as threats to our egos--and we resist them fiercely.

If we are to succeed in changing attitudes, we must adopt

different strategies. We must first accept the way a man views his world. Then we must somehow help him to reorganize his perceptions. Our best hope lies in indirect methods that allow him to see and--of his own volition--correct any disparity from perceptions leading to interpersonal competence and to organizational health.

The rapidly emerging field of organizational development offers methods for effecting such change. These methods are primarily indirect and are designed to help people understand and correct discrepancies between their outlook and the healthy perceptions that underpin a climate of motivation, cooperation, and productivity. Typical methods available for effecting beneficial change include data-gathering techniques, team-building procedures, joint planning sessions, ways of arriving at consensus, the organizational mirror, and business games. These methods and techniques and others are described in the section on organizational development in the pages that follow.

ORGANIZATIONAL DEVELOPMENT - DEFINED

There are many variations of definitions of Organizational Development. Most have many elements in common. The following definition seems to fit most logically.

"Organizational development can be defined as a long-range process, combining elements of science and art, directed toward improving the effectiveness of organizations. Effectiveness implies performance showing acceptable profitability, innovative approaches, productive efficiency, fulfillment of public responsibility, concern for members as human beings, and a healthy psychological climate supporting human growth. Improvement in organizational effectiveness results from increased technical and interpersonal competence throughout the organization.

"The scope of organizational development covers the total enterprise, from the organization in its community to the individual as the fundamental unit of organization.

"The methodology of organizational development is based on principles derived from research in the behavioral sciences; its efforts center in change through planned interventions in organizational processes. The methodology focuses on human problems and therefore provides both cognitive and experiential learning in its change efforts."[1]

---

1. Kuriloff, Arthur H., ORGANIZATIONAL DEVELOPMENT FOR SURVIVAL, New York: A.M.A., 1972, pp. 44-45.

PROBLEM-SOLVING IN ORGANIZATIONAL DEVELOPMENT

Following is a widely used outline of the steps taken in problem-solving in Organizational Development. Sometimes there is need to vary or change the sequence of these steps--depending on the manager's judgment of the specific situation at any given stage in the process.

- Data collection
- Diagnosis
- Stating the desired objective for beneficial change
- Designing the "intervention" (a planned procedure) to achieve the desired change
- Engaging actively in the intervention
- Measuring progress through feedback
- Timing feedback to avoid "noise"
- Recycling the procedure to keep the intervention on course

INTERVENTIONS FOR DIAGNOSIS

MANAGER'S DIAGNOSTIC TEAM MEETINGS

- Purpose: To make periodic assessment of the effectiveness of an organization
  - Team comprises:
    - o Top manager or a principal assistant
    - o Consultant, if used
    - o Staff assistant or assistants with company-wide responsibility, such as personnel manager or human resources manager
    - o Any personnel, on a diagonal section, who can contribute beneficially to the team (group should be kept reasonably small--7 to 12 people maximum--as a rule of thumb)
- Procedure: Data gathering by interviewing, questionnaires, or sensing
  - Personnel prepared ahead of time
  - Unstructured meeting with group
  - Tape recorded for subsequent review

GOAL-SETTING AND ACTION PLANNING MEETING

- Purpose: To set goals and action steps for change with a larger group who work together.
- Steps:
  - Data gathering
  - Goal setting
  - Action planning
- Procedure:
  - Break up into "six-packs," including managers in each subgroup.
  - Each group makes a "grocery list" of changes that would benefit the organization and make it easier for them to do their jobs.
    - o Each selects the two or three most important changes.
  - Each group feeds back to the total group its two or three most important changes.
  - The total group then combines, discards, and assesses to select the three or four changes that would produce the greatest benefit to the organization.
  - Work then proceeds on developing next steps and action plans to effect these changes.
    - o Management by objectives and self-control can be used beneficially here.
    - o Responsibilities for action by individuals are assigned.
  - Follow-up meetings are scheduled to keep the various activities moving.

WORK GROUP DIAGNOSTIC MEETING

- Purpose: Manager and his immediate work group meet to assess their performance.
  - Manager informs his group prior to the meeting that he wants to collect information on specifics, such as:
    - o Planning
    - c Progress in achieving goals
    - o What we do best
    - o What we do worst
    - o How is our teamwork: management style; cooperation in resolving differences of opinion, helping others, not helping others?
    - o Our communications: up, down, and sideways.
- Uses:
  - To help a group decide what change steps, if any, it wants to move ahead on.
  - In advance of a team-building meeting, as a warm-up and to build an agenda.

THE ORGANIZATIONAL MIRROR

- Purpose: To allow an organizational unit to collect data by feedback on how it is perceived by other elements to which it relates: sister units, peer groups, customers, suppliers, or other units that use their services.
- "Consultant" or objective third party interviews representatives of both groups to get the sense of the important perceptions of both parties.
- Consultant feeds back to both parties, in the meeting, what he has learned.
  - "Outsiders" (other elements of the organization) discuss and interpret the data in a fishbowl.
  - "Insiders" (group wanting feedback on how it's perceived) interpret what they heard outsiders say; identify issues needing clarification.
- General, open discussion to summarize what has happened so far (no solving of problems allowed).
- Subgroups of outsiders and insiders identify the four or five most important changes needed to improve the effectiveness of the organization.
  - Subgroups report to total group.
- Total group synthesizes lists.
- Subgroups develop plan and specific action items for making change.
- Task groups assigned.

Summary: Each task group reports on plans, action steps, persons responsible, and target dates for accomplishment.

- Consultant, or head manager of inside group, summarizes day's work.
- Uses:
  - As indicated, for finding out what others perceive in behavior of initiating group.
  - Particularly useful for staff service groups:
    - o When a group or organizational unit is being bypassed.
    - o When a group receives undeserved criticism.

FORCE FIELD ANALYSIS

- A group in a state of social stability (quasi-stationary equilibrium) is in balance between the forces that exert pressures for change and forces that resist change.
  - Forces exerting pressure for change are called driving forces.
  - Forces resisting change are called restraining forces.
- At any one moment the sum of the driving forces must be equal to the sum of the restraining forces.
- To use the method for diagnosis, identify by appropriate organizational development techniques the restraining and driving forces.
  - Techniques might include: Direct interviews with individuals or groups, questionnaires, sensing, organizational mirror, or careful observation.
- Array the restraining forces in priority of intensity
  - Choose the one or two both easiest to reduce and likely to produce the most significant effect when eliminated or reduced in intensity.
    - o Effect the necessary change to reduce or eliminate their impact.
- Movement will now occur toward the behavior desired.
- When the desired change has been achieved, the new behavior may be stabilized by applying appropriate techniques in the

methodology of organizational development: team building, group problem-solving, organizational mirror, planning sessions, or other specially arranged means intended to reinforce the new behavior.

Note: Force field analysis includes an element of technique for change to its diagnostic utility.

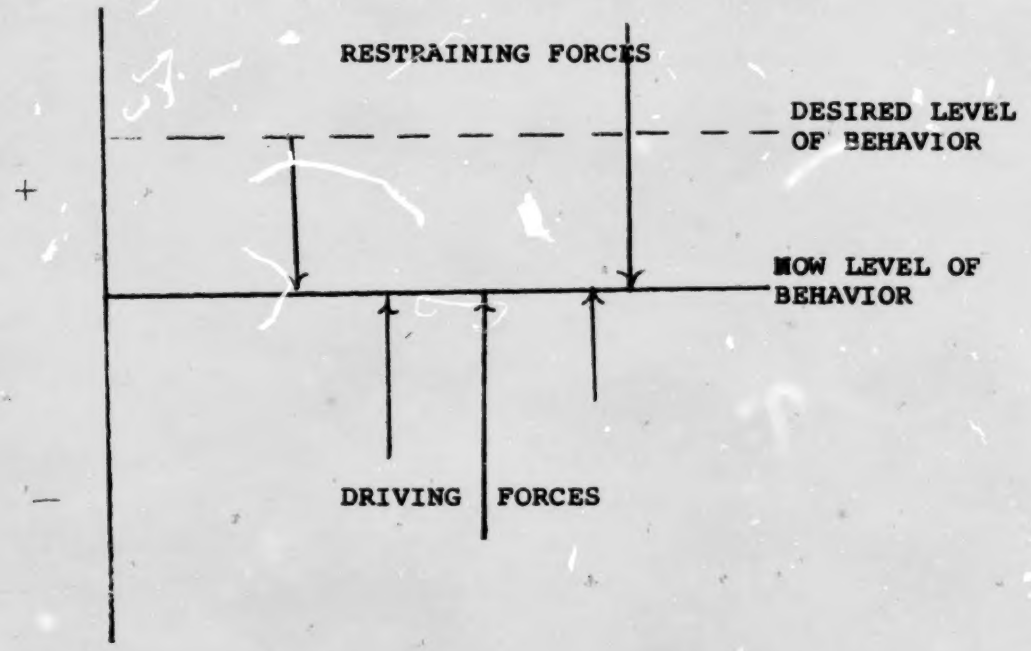


Figure 1

FORCE FIELD

INTERVENTIONS FOR CHANGE

OPERATING GROUP TEAM-BUILDING MEETING

- Purpose: To build teamwork in an operating group.
  - Who: Manager, his group, and a consultant, if available
- Background: Time can run 1 to 5 days
  - Candid, open communication about ideas and feelings.
  - Joint participation required in all aspects of the meeting:
    - o Early planning
    - o Meeting process
    - o Follow-up
- Typical steps in procedure:
  - Set objectives for the meeting
    - o Always look at both content and process.
    - o Planning done by manager, consultant, and selected personnel
  - Gather data for the meeting
    - o Use questionnaires, instruments such as check lists, sensing, or interviewing.
    - o Or use Family Group Diagnostic Meeting.
  - Conducting the meeting
    - o Manager or consultant presents the data to the whole group.
    - o Group, or subgroups, prepare agenda, with items listed by priority.

- o Group throws out the "noise" or "garbage" (personal and interpersonal issues that stand in the way of the process of problem-solving per the agenda)
- o Group produces a list of action steps to be taken after the meeting, assigns responsibilities, and target dates for achievement.

- Follow-up
  - o One-shot inspirational meetings don't fix things permanently.
  - o Technical and interpersonal competence need continual attention and support.
  - o Set up the schedule for a follow-up meeting.
  - o Conduct a post-mortem on the previous meeting; ask questions like:
    - . How do you feel about the meeting now?
    - . Are we slipping? How?
    - . Did we make decisions that we should re-evaluate?
    - . Did we skip something we should take up now?
    - . Did anything come up at the meeting that you now feel uncomfortable about?
  - o Report back from those responsible for action plans (doesn't have to be in a team meeting.)
  - o Readjustment and re-planning to correct variances.
    - . Manager can do this on a one-to-one basis, or have one of his tenacious, responsible subordinate (staff members) managers do this.
  - o Team-building session (1-5 days) might follow a twice-a-year schedule.

CONFLICT RESOLUTION--MEETINGS FOR TWO

- Purpose: To improve cooperation between two people, boss and subordinate, or peers.
  - Aims:
    - o To improve interpersonal relations (get rid of dysfunctional influences acting between them).
    - o To identify what each expects of the other.
    - o To clarify how each individual's expectations are not being met.
    - o To negotiate changes in the expectations and how they're to be met.
    - o To increase mutual helpfulness and cooperation.
- Method:
  - Each party makes up three lists:
    - o Positive feedback list: "Things I value in the way we work together."
    - o Bug list: "Things you do that I can't stand, that bug me."
    - o Empathy list: "Things that I predict you'll say about our relationship and me"--positive and bug.
  - Each presents his lists in turn, orally to the other, monitored by consultant, or objective third party.
    - o No talking or arguing, except to ask a question for clarification, while the other presents his lists.
  - Each may now add information that will clear up unclear points.
    - o No talking or arguing, as before.

- The parties now negotiate around changes they would like to see happen.
  - o They agree to planned changes; decide how to bring them about.
- The consultant lists the agreed upon actions--and also those not yet resolved.
  - o The parties decide how to go about resolving these issues--or agree to let them be for the time being.
- The pair then plans follow-up measures to check on their action steps and how they are progressing toward the agreed upon goals.

• Uses:

- For two people who are unhappy, frustrated, angry with each other, psychologically divorced.
- For key managers whose work meshes, who must collaborate, and whose interpersonal transactions materially affect the organization.
- For manager and subordinate who must work closely together.

• Notes:

- Not for routine issues. This method is to be used for major overhauls.
- Consultant should always provide follow-up.

- Rogerian reversal of roles is useful here.[2]

---

2. This is a technique, suggested by Carl Rogers, for reducing the tension between two people who are in conflict. The consultant, or other objective third party, suggests that each repeat in his own words what the other has said, until the latter agrees that first party has really stated his meaning accurately. When both have gone through this procedure to each other's satisfaction the dispute usually will have lost its sting. Resolution of the conflict very often follows, under guidance of the third party, if necessary.

INTERGROUP TEAM-BUILDING MEETING

- Purpose: Two groups meet to improve their collaboration in work. The meeting is designed to foster mutual understanding and cooperation--and to cut down isolation and destructive competition. This technique is useful in mergers as well as in single organizations.
- Procedure: Similar to conflict resolution between two people--to bring out hidden resentment and mistrust; to separate distorted perceptions from clear perceptions; to develop explicit mutual helpfulness.
- Steps:
  - Setting objectives for the meeting.
    - o Planning committee made up of managers of the two groups, consultant or other objective third party, and perhaps two or three representative of each group.
      - . Committee discloses its impressions of current relationships.
      - . Decides on what data are needed before groups meet, and how to gather such data.
      - . Outlines procedure for the meeting and the follow-up afterwards.
      - . Decides who should attend, the time, length, and place of meeting.

- Data gathered, by means previously discussed: questionnaires, check list, interview, or others.
- Meeting held
  - o Three lists prepared separately by each group:
    - . Positive feedback list
    - . Bug list
    - . Empathy list; prediction of what other group has on its lists
  - o Spokesman for each group presents the lists.
    - . Consultant states ground rules and monitors proceedings: no argument, no talking, only questions requesting clarification permitted.
  - o Total group prepares a working agenda, sets priorities.
  - o Subgroups are formed to work on each item of agenda (membership from both groups).
    - . Report back to total group stating proposed objectives and action plans
  - o Total group formulates a list of action items that it commits itself to perform.
    - . Action steps are assigned to individuals, dyads (two persons), or larger subgroups, with responsibilities, target dates, and follow-up procedures agreed upon.

• Uses:

- Remedy for parochialism.
- Problems between line and staff.
- Headquarters and the field.
- Supplier and customer.
- Specialist group A and specialist group B.
- Your tribe and mine.

- Notes:
  - Time: 1/2 day to 2 days
  - Group size: 4 to 40
  - Restrict items to things group members can do something about.
  - When used to facilitate relationships in mergers:
    - o In this case the lists should be as follows:
      - . What we like about the merger.
      - . What we are concerned about in the merger.
      - . Our predictions about what the others' lists will contain.
  - Second phase should follow the Operating Group Team-Building procedure, with the total group working in concert around its new joint goals and organization.

    (Note: Procedure is similar to conflict resolution meeting between two parties.)

    Caution: Before the meeting starts, the top manager should state what decisions are firm and must be adhered to--and what decisions are open to problem-solving by the group.

GUIDELINES FOR CONSENSUS IN GROUP DECISION-MAKING

Group consensus may be difficult to reach. As operationally defined, a consensual decision is one with which all group members can at least reasonably agree. To achieve group consensus the following list of suggestions can be used as a guideline:

1) Avoid arguing for your own individual prediction or point of view merely because it is your prediction or point of view.
2) Approach the task on the basis of logic rather than on the basis of who made the prediction.
3) Avoid changing your mind only in order to reach agreement and avoid conflict. Also, avoid conflict reducing techniques such as majority vote, averaging, or trading in reaching a group decision.
4) Support only solutions with which you are able to agree completely or at least to a reasonable extent.
5) View differences of opinion as helpful rather than as a hindrance in reaching a group decision.

CHAPTER 2

MANAGEMENT BY OBJECTIVES[1]

Management by Objectives offers a proved and practical way of ensuring management control while providing an environment of individual freedom. Through its use we can re-engage the concepts of rugged individualism within the discipline needed to achieve organizational objectives.

Management by objectives applies to the total group of managers in the organization. The process of management by objectives depends on <u>total planning</u> within the organization. To avoid the confusions of terminology found in the literature, three key words may be used to describe the elements of the planning:

- <u>Objective</u>. An overall position, situation, or condition that is to be reached. Objectives are inherently long-range, generally requiring from one to five years to attain.
- <u>Goal</u>. An end result, shorter in range than an objective, but necessary to achieve before the objective can be realized. It will usually be found that several goals must be met before an

---

1. This section has been adapted from Arthur H. Kuriloff, "Updating Bureaucracy", ASTME VECTORS, Dearborn, Mich., 1968/4.

objective can be accomplished.

- Action Plan. A step, task, project, program, or other activity requiring action by one or more members of the organization. Several action plans will usually be required to reach a goal.

Action plans imply activity of some kind inside or outside the organization. In the long run the success of the organization in achieving its objectives--and therefore its performance--depends on the appropriateness of its action plans and the effectiveness with which they are carried out.

CHARACTERISTICS OF PLANS

Objectives, goals, and action plans have several characteristics in common:

- Each should be clearly defined in simple language. The target date for the achievement of each should be stated.
- A method of measuring the accomplishment of each should be identified, including an appropriate frequency of measurement.
- The achievement of objectives should require extending the capabilities of the organization to some extent; similarly, the achievement of goals and action plans should challenge the individual by requiring him to stretch his capacities a reasonable amount.

- Objectives, goals, and action plans should be attainable; they should not be made so difficult as to exceed the capacities of the man or the organization.
- Objectives, goals, and action plans should be limited in number. When the number of plans in each category exceeds a half-dozen or so, the planning is probably getting too complicated for its intended purpose, which is to afford a guide to what should be done. Planning does not comprise step-by-step instructions.

PLANNING PROCEDURE

Planning should start at the top. The top executive should set the objectives of the organization. He should, of course, get all the help he can from his staff and other managers in the organization. But it is his responsibility to design the overall organization objectives--which he is obligated to fulfill--if management by objectives is to work.

Once the key objectives for the organization are set, the top executive works with executives at the next level to define goals under each objective. The executives are expected to contribute heavily to the formulation of goals, for they assume responsibility for achieving the goals so established.

The second-level executives will now work out action plans for achieving corporate goals in consultation with their

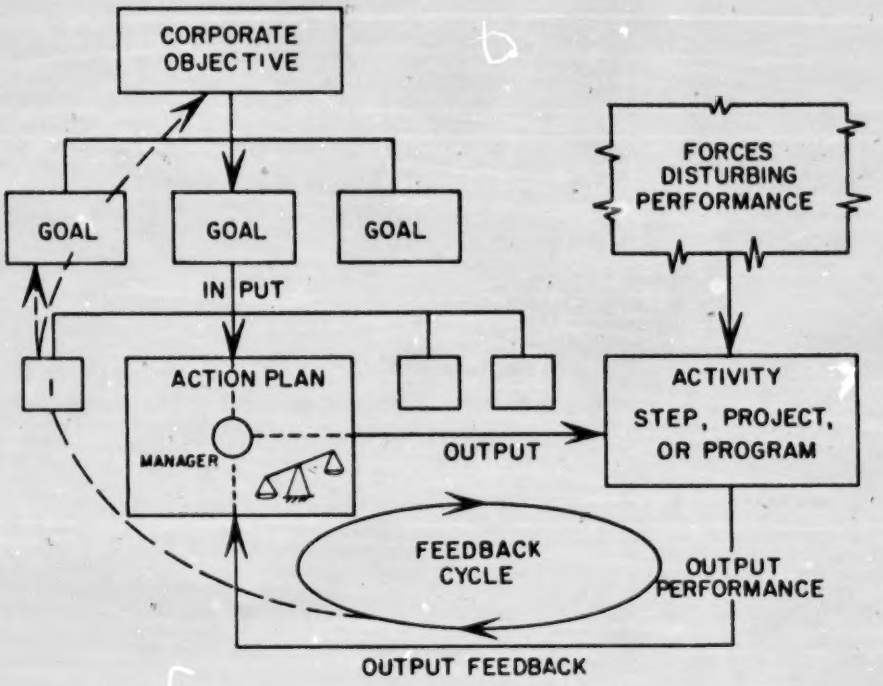
immediate subordinates (executives or managers at the third level), who in turn are expected to make contributions to the plans and assume responsibility for their accomplishment.

It will be observed that there is a change of scale value at each level. Organization goals once set by agreement between the chief executive and his next-level executives become objectives for them. In turn, second-level goals and action plans may become objectives and goals for third-level managers. This will become clear from examination of the diagram in Figure 1.

The most important element in the system of management by objectives is the individual manager. It is he who does the basic planning for his own activities, consults with and secures the consent of his boss for these activities. Above all, it is the individual who accepts personal responsibility for the achievement of the results desired of him--and agrees to be judged by the results he achieves. In the more advanced applications of management by objectives, the individual's gross pay for the year is systematically influenced by the level of attainment he has reached in achieving the results he himself has planned. Equitable adjustment, of course, is made for factors beyond his control that may have influenced his performance. The planning process for the individual manager may be readily understood by reference to the diagram in Figure 2.

PAGE 26 OF THIS DOCUMENT WAS
REMOVED PRIOR TO ITS BEING SUBMITTED TO
THE ERIC DOCUMENT REPRODUCTION SERVICE
BECAUSE IT WOULD NOT REPRODUCE IN MICROFICHE.

THE PLANNING PROCESS IN MANAGEMENT BY OBJECTIVES *



NOTES

1. Goal, or end result desired, stated in measurable terms, becomes an input for the individual manager.

2. Manager develops action plans for achieving goals, leading to activity—and output performance.

3. Changing conditions or personal factors produce disturbing forces that cause variance from desired performance.

4. Manager measures output performance against input data from desired goal and adjusts or revises plans—including goal, or even objective, when appropriate—leading to corrective changes in activities.

5. The planning process depends on a continuing series of feedback cycles in which the manager measures his performance against his goal, revises his plans, and thereby develops more effective activity.

FIGURE 2

* From: Kuriloff, Arthur H., "Updating Bureaucracy", ASTME VECTORS, 1968/4, p. 25, By permission.

The process of management by objectives, when carefully employed, works to free the individual managers for creative, innovative effort. It is concerned with results--and not with the idiosyncracies of individual style or method. It controls the destiny of the organization by a completely integrated system of planning; it does not attempt to dictate how the individual manager shall do his job. He is free to act in accordance with his desires, proclivities, and talents within a framework of legitimacy defined by the planning process.

CHAPTER 3

MATRIX ORGANIZATION

Beyond the adoption of management by objectives, there is growing need for a special structure for the technical end of the organization. The need of a replacement for the usual organizational pyramid seems clear in view of the increasing complexity of research and development. The design and development of advanced products requires more subtle and sophisticated scientific insights than in the past. Inevitably, these developments result from the cooperative efforts of men with diverse technical backgrounds. Often they do not speak the same language. To the mechanical engineer, bit means something quite different than to the communications expert. (If this seems simplistic, try having a statistician explain chi squared to a pneumatic circuit designer.)

The manager of a technical group in which disparate intellectual disciplines are combined must be able to act not only as a simultaneous translator between men, but also as a linking-pin in an organization. Given these highly developed abilities in the manager, what can be done about the structure of the technical organization itself?

The technical development task demands high flexibility in the group, with specialists moving in and out as the job requires. Without such flexibility we would expect to see declining effectiveness as members become trapped in increasingly

routine chores within a rigid structure. The buoyancy and initiative in the group would diminish as stultification and frustration set in.

The matrix form of organization offers a solution to this problem. The specialists in this organizational design report administratively to a chief specialist who is responsible for their salaries and advancement in grade. Project managers with the special abilities previously described would be part of, and report into, the conventional structure of the organization. The project managers and technical managers work cooperatively to form, re-form, and adjust membership in project groups as the task requires. The scheme is shown diagramatically in Figure 3.

The project manager and the technical manager would work with the group, setting objectives, goals, and action plans--managing by objectives. In this way it is possible to adapt conventional organizations to the demands of technology for increased flexibility. Both administrative and functional management could be accomplished by placing competent managers in linking-pin positions at the interfaces of the matrixes with usual pyramidal structures.

As a concluding proposal, a matrix form might well serve other purposes in the organization. It would be necessary to think through the administrative and functional needs from chief executive to first-line supervisor. The pyramid of organization could then be modified where appropriate to improve organizational effectiveness and adapt it to the changing

MATRIX ORGANIZATION FOR RESEARCH AND DEVELOPMENT*

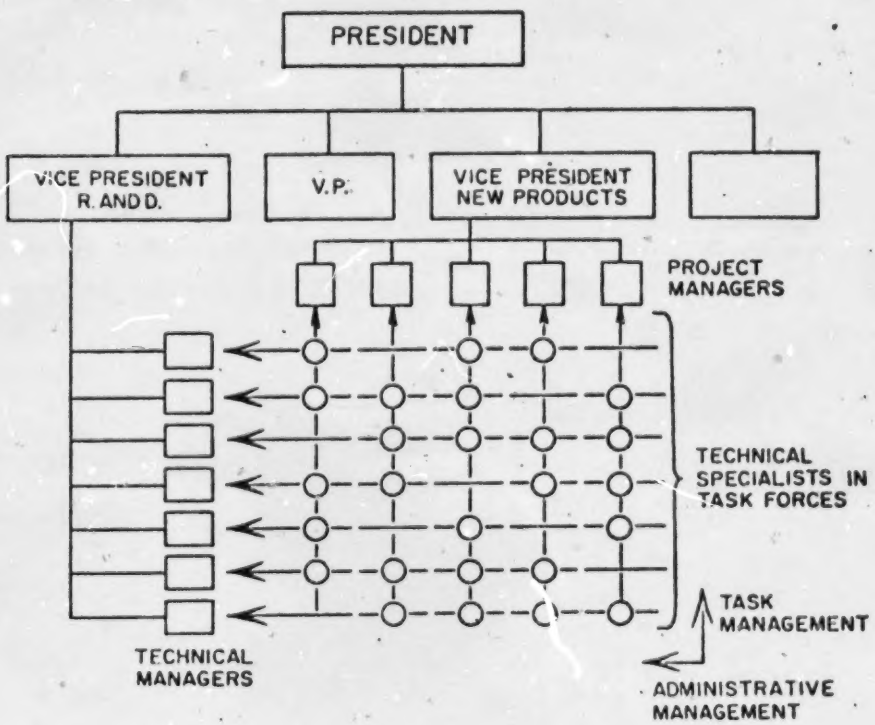


FIGURE 3

* From: Kuriloff, Arthur H., "Updating Bureaucracy", ASTME VECTORS, 1968/4, p. 26. By permission.

new world. Top management could in this way control the destiny of the organization while encouraging its members to achieve individual freedom within the organization.

BIBLIOGRAPHY
FOR CHAPTER 1

Fordyce, Jack K., and Weil, Raymond, MANAGING WITH PEOPLE, Reading, Mass.: Addison-Wesley Publishing Co., 1971.

This is a handbook of practical organizational development methods and techniques. It is intended for use by managers who are interested in tested methods for making improvement in the effectiveness of their organizations. The text is simply and directly written; it gives instructions on what to do to effect change and how to do it.

Kuriloff, Arthur H., ORGANIZATIONAL DEVELOPMENT FOR SURVIVAL, New York: American Management Association, 1972.

This is a basic book that gives the background of organizational development, outlines the methods and techniques for effecting beneficial change in organizations, and presents applications from on-the-job managerial and consulting experience. Two chapters in the book are devoted to management by objectives and self-control, which the author considers integral to organizational development.

Margulies, Newton, and Raia, Anthony P., ORGANIZATIONAL DEVELOPMENT: VALUES, PROCESS, AND TECHNOLOGY, New York: McGraw-Hill Book Co., 1972.

This text gives broad coverage to organizational development. It is basically a book of readings, with introductory comments by the authors. It is especially suitable for those who wish to become thoroughly familiar with the origins, background, and theoretical considerations from which organizational development emerged.

BUSINESS GAMES.

Many business games that offer useful training experiences in team problem-solving are commercially available. Typical are THE DESERT SURVIVAL SITUATION, THE SUB-ARTIC SURVIVAL SITUATION, and THE PROJECT PLANNING PROBLEM published by Experiential Learning Methods, Plymouth, Michigan. Many others will be found in A HANDBOOK OF STRUCTURED EXPERIENCES FOR HUMAN RELATIONS TRAINING, published by University Associates Press, San Diego, California. These games bring out the advantages of consensual problem-solving in many situations where the circumstances are not clearly defined and there are no individual experts to guide the solution. Individuals involved in these games usually find them absorbing--and learn a great deal about the need for teamwork in solving unstructured problems.

BIBLIOGRAPHY
FOR CHAPTERS 2 & 3

Beck, A.C., and Hillman, E.D., A PRACTICAL APPROACH TO ORGANIZATION DEVELOPMENT THROUGH MBO: SELECTED READINGS, Addison-Wesley, 1972.

The focus of this book is on the use of MBO as a vehicle for organizational development (OD). Selected readings are used to cover many of the vital areas of both MBO and OD. They are well selected and include the words of many well-known writers in the field. Overall, the book provides the practicing manager with a broader view of the dynamic environment of his organization and the factors involved in implementing an MBO system.

Carroll, S.J., Jr., and Tosi, H.L., Jr., MANAGEMENT BY OBJECTIVES: APPLICATIONS AND RESEARCH, Macmillan, 1973.

Written for the student and the practitioner, this book reports on the existing research findings relative to MBO and develops some practical guidelines for designing and implementing an MBO program. The authors conclude that this approach can improve organizational planning and managerial performance and attitudes. They caution, however, that MBO will fail or not live up to expectations if it is not given adequate support and is not well integrated into the organization. Numerous suggestions and operating guides are provided throughout the book. These generally focus on the implementation of MBO, on goal setting, on carrying out the review process, and on integrating MBO with other systems.

Drucker, Peter F., THE PRACTICE OF MANAGEMENT, New York: Harper & Brothers, 1954, ch. 11.

In this chapter, called "Management by Objectives and Self-Control," Drucker laid down the basic concepts of management by objectives for the first time. The rationale of this managerial methodology is clearly explained. Anyone interested in management by objectives would do well to read this chapter as a first step.

Drucker, Peter F., MANAGING FOR RESULTS, New York: Harper & Row, 1964.

This is a "how-to-do-it" book. Drucker carries the concepts of management by objectives several steps farther than in his THE PRACTICE OF MANAGEMENT, although he doesn't use the term, "management by objectives." The book presents many specific suggestions for improving the planning process and decision-making in management.

Mali, Paul, MANAGING BY OBJECTIVES: AN OPERATING GUIDE TO FASTER AND MORE PROFITABLE RESULTS, Wiley, 1972.

The total mission of an organization, according to this author, is accomplished by breaking it up into several phases, developing operating plans for each phase, and setting a time scale for the completion of each phase. MBO is described as a five-phase process: (1) finding the objective; (2) setting the objective; (3) validating the objective; (4) implementing the objective; and (5) controlling and reporting status of the objective. A number of unique concepts, guidelines, and illustrations designed to facilitate each phase in the process are provided throughout the book.

Morrisey, George L., MANAGEMENT BY OBJECTIVES AND RESULTS, Addison-Wesley, 1970.

This is an elementary book on managing by objectives and results, labelled MOR by the author. This approach, in essence, breaks down the managerial job into its basic functions, selects those that are most important to the individual manager, and then lays them out in an orderly and logical sequence of activities. Particular attention is paid to costs associated with a given effort. Although the MOR process is described around the five basic management functions, the focus is on planning and controlling. Special emphasis is placed on defining roles and missions, forecasting, programming, scheduling, and budgeting as integral elements in the process. The author provides numerous illustrations and "how-to-do-it" examples throughout the text.

Odiorne, George S., MANAGEMENT BY OBJECTIVES, Pittman, 1965.

This is an introduction to the philosophy, method, and process of managing by objectives. The general approach is to treat MBO as a system. In addition to providing a description of the process and some guidelines for setting individual and organizational goals, the author devotes several chapters to key questions and areas. These include the level and extent of subordinate participation in goal-setting, the relationship of MBO to salary administration, and the problem of the annual performance review. He also provides some guidelines to facilitate the implementation of MBO in an ongoing organization.

Odiorne, George S., MANAGEMENT DECISIONS BY OBJECTIVES, Prentice-Hall, 1969.

This is essentially an expansion of the author's earlier book on MBO. The description is generally around setting objectives, gathering facts, identifying and specifying problems, searching for optimal solutions, taking action, and controlling the effects of decisions. The author also deals with some of the other aspects of managerial decision-making and practices. Included are the management of time, the art of managing, making snap judgments, and other considerations. The discussion of some of the tools for making decisions includes sampling and aspects of probability.

Raia, Anthony P., MANAGING BY OBJECTIVES, New York: Scott, Foresman & Co., 1971.

This book does an excellent job of presenting the fundamental tools and concepts required to design and put an effective MBO system into practice. It is based upon management theory, research, and practical experience with the system. It is written at a level a step above the simple "cook book" approach, at an intermediate level of difficulty; it is a very good all around reference.

Reddin, W.J., EFFECTIVE MANAGEMENT BY OBJECTIVES, Prentice-Hall, 1969.

The focus of this book is on the concept of "effectiveness areas" and team implementation in MBO. Effectiveness areas, as defined by the author, reflect the "general output requirements of a managerial position." This is somewhat different from the notion of "key result areas," which stresses greater selectivity of job outputs. The author also believes that many firms try to achieve too much too soon and, as a result, tend to freeze the organization so that it is less able to cope with the changes required to implement MBO. "Unfreezing" is accomplished by a series of management team meetings (starting at the top) designed to ensure that managers understand the nature of MBO, and are capable of identifying effectiveness areas and of setting improvement objectives.

DISTRIBUTION LIST

Navy

4 Dr. Marshall J. Farr, Director
Personnel and Training Research Programs
Office of Naval Research (Code 458)
Arlington, VA 22217

1 ONR Branch Office
495 Summer Street
Boston, MA 02210
ATTN: Dr. James Lester

1 ONR Branch Office
1030 East Green Street
Pasadena, CA 91101
ATTN: Dr. Eugene Gloye

1 ONR Branch Office
536 South Clark Street
Chicago, IL 60605
ATTN: Dr. Charles E. Davis

1 Dr. M.A. Bertin, Scientific Director
Office of Naval Research
Scientific Liaison Group/Tokyo
American Embassy
APO San Francisco 96503

1 Office of Naval Research
Code 200
Arlington, VA 22217

6 Director
Naval Research Laboratory
Code 2627
Washington, DC 20390

1 Technical Director
Navy Personnel Research and
Development Center
San Diego, CA 92152

1 Assistant Deputy Chief of Naval
Personnel for Retention Analysis
and Coordination (Pers 12)
Room 2403, Arlington Annex
Washington, DC 20370

1 LCDR Charles J. Theisen, Jr.,
MSC, USN
4024
Naval Air Development Center
Warminster, PA 18974

1 Dr. Lee Miller
Naval Air Systems Command
AIR-413E
Washington, DC 20361

1 Commanding Officer
U.S. Naval Amphibious School
Coronado, CA 92155

1 Chairman
Behavioral Science Department
Naval Command & Management Division
U.S. Naval Academy
Annapolis, MD 21402

1 Chief of Naval Education & Training
Naval Air Station
Pensacola, FL 32508
ATTN: CAPT Bruce Stone, USN

1 Mr. Arnold I. Rubinstein
Human Resources Program Manager
Naval Material Command (0344)
Room 1044, Crystal Plaza #5
Washington, DC 20360

1 Dr. Jack R. Borsting
U.S. Naval Postgraduate School
Department of Operations Research
Monterey, CA 93940

1 Director, Navy Occupational Task
Analysis Program (NOTAP)
Navy Personnel Program Support
Activity
Building 1304, Bolling AFB
Washington, DC 20336

1 Office of Civilian Manpower Management
Code 64
Washington, DC 20390
ATTN: Dr. Richard J. Niehaus

1 Chief of Naval Reserve
Code 3055
New Orleans, LA 70146

1 Chief of Naval Operations
OP-987P7
Washington, DC 20350
ATTN: CAPT H.J.M. Connery

1 Superintendent
Naval Postgraduate School
Monterey, CA 93940
ATTN: Library (Code 2124)

1 Mr. George N. Graine
Naval Sea Systems Command
SEA 047C12
Washington, DC 20362

1 Chief of Naval Technical Training
Naval Air Station Memphis (75)
Millington, TN 38054
ATTN: Dr. Norman J. Kerr

1 Principal Civilian Advisor
for Education and Training
Naval Training Command, Code 00A
Pensacola, FL 32508
ATTN: Dr. William L. Maloy

1 Director
Training Analysis & Evaluation Group
Code N-00t
Department of the Navy
Orlando, FL 32813
ATTN: Dr. Alfred F. Smode

1 Chief of Naval Training Support
Code N-21
Building 45
Naval Air Station
Pensacola, FL 32508

1 Navy Personnel Research
and Development Center
Code 01
San Diego, CA 92152

5 Navy Personnel Research
and Development Center
Code 02
San Diego, CA 92152
ATTN: A.A. Sjoholm

2 Navy Personnel Research
and Development Center
Code 306
San Diego, CA 92152
ATTN: Dr. J.H. Steinemann

2 Navy Personnel Research
and Development Center
Code 309
San Diego, CA 92152
ATTN: Mr. R.P. Thorpe

1 Navy Personnel Research
and Development Center
San Diego, CA 92152
ATTN: Library

Army

1 Technical Director
U.S. Army Research Institute for the
Behavioral and Social Sciences
1300 Wilson Boulevard
Arlington, VA 22209

1 Armed Forces Staff College
Norfolk, VA 23511
ATTN: Library

1 Commandant
U.S. Army Infantry School
Fort Benning, GA 31905
ATTN: ATSH-DET

1 Deputy Commander
U.S. Army Institute of Administration
Fort Benjamin Harrison, IN 46216
ATTN: EA

1 Dr. Stanley L. Cohen
U.S. Army Research Institute for
the Behavioral and Social Sciences
1300 Wilson Boulevard
Arlington, VA 22209

1 Dr. Ralph Dusek
U.S. Army Research Institute for the Behavioral and Social Sciences
1300 Wilson Boulevard
Arlington, VA 22209

1 HQ USAREUR & 7th Army
ODCSOPS
USAREUR Director of CED
APO New York 09403

1 ARI Field Unit - Leavenworth
Post Office Box 3122
Fort Leavenworth, KS 66027

1 Dr. Milton S. Katz, Chief
Individual Training & Performance Evaluation
U.S. Army Research Institute for the Behavioral and Social Sciences
1300 Wilson Boulevard
Arlington, VA 22209

Air Force

1 Research Branch
AF/DPMYAR
Randolph AFB, TX 78148

1 Dr. G.A. Eckstrand (AFHRL/AST)
Wright-Patterson AFB
Ohio 45433

1 AFHRL/DOJN
Stop #63
Lackland AFB, TX 78236

1 Dr. Martin Rockway (AFHRL/TT)
Lowry AFB
Colorado 80230

1 Dr. Alfred R. Fregly
AFOSR/NL
1400 Wilson Boulevard
Arlington, VA 22209

1 Dr. Sylvia R. Mayer (MCIT)
Headquarters Electronic Systems Division
LG Hanscom Field
Bedford, MA 01730

1 AFHRL/PED
Stop #63
Lackland AFB, TX 78236

Marine Corps

23 Commandant of the Marine Corps (Code RD
Headquarters, United States Marine Corps
Washington, DC 20380

Coast Guard

1 Mr. Joseph J. Cowan, Chief
Psychological Research Branch
(G-P-1/62)
U.S. Coast Guard Headquarters
Washington, DC 20590

Other DOD

1 Military Assistant for Human Resources
Office of the Secretary of Defense
Room 3D129, Pentagon
Washington, DC 20301

12 Defense Documentation Center
Cameron Station, Building 5
Alexandria, VA 22314
ATTN: TC

Other Government

1 Dr. Lorraine D. Eyde
Personnel Research and Development Center
U.S. Civil Service Commission
1900 E Street, N.W.
Washington, DC 20415

1 Dr. William Gorham, Director
Personnel Research and Development Center
U.S. Civil Service Commission
1900 E Street, N.W.
Washington, DC 20415

1 U.S. Civil Service Commission
Federal Office Building
Chicago Regional Staff Division
Regional Psychologist
230 South Dearborn Street
Chicago, IL 60604
ATTN: C.S. Winiewicz

Miscellaneous

1 Dr. Gerald V. Barrett
University of Akron
Department of Psychology
Akron, OH 44325

1 Dr. Bernard M. Bass
University of Rochester
Graduate School of Management
Rochester, NY 14627

1 Dr. A. Charnes
BEB 512
University of Texas
Austin, TX 78712

1 Dr. Rene' V. Dawis
University of Minnesota
Department of Psychology
Minneapolis, MN 55455

1 Dr. Robert Dubin
University of California
Graduate School of Administration
Irvine, CA 92664

1 Dr. Marvin D. Dunnette
University of Minnesota
Department of Psychology
Minneapolis, MN 55455

1 ERIC
Processing and Reference Facility
4833 Rugby Avenue
Bethesda, MD 20014

1 Dr. Edwin A. Fleishman
Visiting Professor
University of California
Graduate School of Administration
Irvine, CA 92664

1 Dr. M.D. Havron
Human Sciences Research, Inc.
7710 Old Spring House Road
West Gate Industrial Park
McLean, VA 22101

1 HumRRO Central Division
400 Plaza Building
Pace Boulevard at Fairfield Drive
Pensacola, FL 32505

1 HumRRO/Western Division
27857 Berwick Drive
Carmel, CA 93921
ATTN: Library

1 HumRRO Central Division/Columbus Office
Suite 23, 2601 Cross Country Drive
Columbus, GA 31906

1 HumRRO/ Western Division
27857 Berwick Drive
Carmel, CA 93921
ATTN: Dr. Robert Vineberg

1 Dr. Lawrence B. Johnson
Lawrence Johnson & Associates, Inc.
2001 S Street, N.W., Suite 502
Washington, DC 20009

1 Dr. Ernest J. McCormick
Purdue University
Department of Psychological Sciences
Lafayette, IN 47907

1 Dr. Lyman W. Porter, Dean
University of California
Graduate School of Administration
Irvine, CA 92650

1 Dr. Joseph W. Rigney
University of Southern California
Behavioral Technology Laboratories
3717 South Grand
Los Angeles, CA 90007

1 Dr. George E. Rowland
Rowland and Company, Inc.
P.O. Box 61
Haddonfield, NJ 08033

1 Dr. Benjamin Schneider
University of Maryland
Department of Psychology
College Park, MD 20742

1 Dr. Arthur L. Siegel
Applied Psychological Services
404 East Lancaster Avenue
Wayne, PA 19087

1 Mr. George Wheaton
American Institutes for Research
3301 New Mexico Avenue, N.W.
Washington, DC 20016